(No Model.)

L. J. WING.

SUPPORTING CRANE FOR ELECTRIC LAMPS.

No. 378,913. Patented Mar. 6, 1888.

Fig. 1.

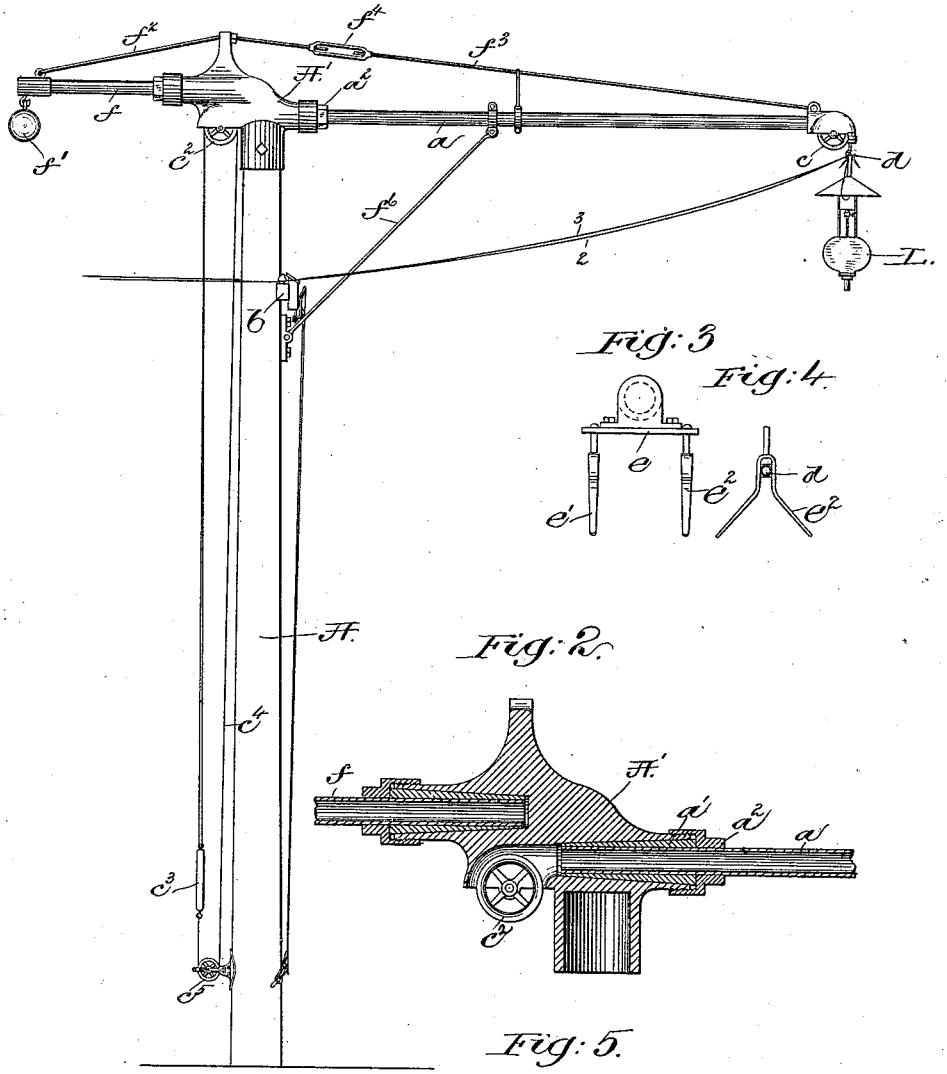

Fig. 3

Fig. 4

Fig. 2.

Fig. 5.

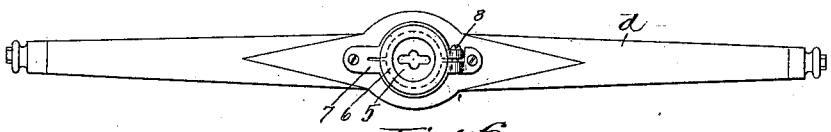

Fig. 6.

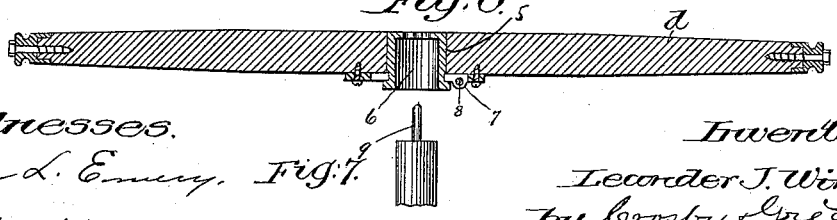

Fig. 7.

Witnesses.
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UNITED STATES PATENT OFFICE.

LEANDER J. WING, OF LEXINGTON, MASSACHUSETTS.

SUPPORTING-CRANE FOR ELECTRIC LAMPS.

SPECIFICATION forming part of Letters Patent No. 378,913, dated March 6, 1888.

Application filed May 3, 1887. Serial No. 236,931. (No model.)

To all whom it may concern:

Be it known that I, LEANDER J. WING, of Lexington, county of Middlesex, State of Massachusetts, have invented an Improvement in Supporting-Cranes for Electric Lamps, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention has for its object to construct a support or crane for an electric lamp whereby the lamp may be held suspended from or above the center of the street.

In accordance with this invention the jib of the crane which supports the lamp is provided with a center balancing-arm having an attached weight to counterbalance the weight of the lamp and to maintain the jib in fixed position under all conditions. The lamp is herein shown as attached to a lamp-carrying cable which passes over suitable pulleys at the top of the crane, and an operating-cord provided with a suitable counterbalancing-weight is employed to move the lamp-carrying cable to raise or lower the lamp, as more fully shown and described in another application, Serial No. 236,930, filed by me May 3, 1887. Numerous other features are also herein shown which are the same as in the said application. The lamp is also shown as provided with a cross-bar having porcelain knobs at the ends, to which the conductors are attached, and a retaining device is employed which engages the cross-bar and prevents the lamp from swinging in a high wind.

Figure 1 shows in side elevation a crane or support for an electric lamp; Fig. 2, a horizontal section of a portion of the top or jib of the crane secured to its head; Figs. 3 and 4, side and end views of the retaining device which engages the cross-bar of the lamp; Figs. 5 and 6, top and sectional views of the cross-bar, and Fig. 7 a detail of the lamp-chimney.

The vertical post or support A is provided at its upper end with a head, A′, having a jib-receiving socket at one end to receive the jib or overhanging arm *a*, which enters the tapering sleeve *a′*, fitted snugly in the socket. The tapering sleeve *a′* is forced into the socket to hold the jib in place by a screw cap or nut, a^2, engaging a screw-threaded portion of the head A′ and bearing against the outer or larger end of the tapering sleeve. The jib *a* is tubular and supports at its outer end a pulley, *c*, over which the lamp-carrying cable c' passes, said cable passing through the tubular jib and over one sheave of a two-sheaved pulley, c^2, which is supported within a recessed portion of the head A′ opening into the jib-receiving socket.

To one end of the cable c' is attached a lamp, L, and the other end of the said cord or chain is attached to a counterbalancing-weight, c^3. The operating-cord c^4 passes about the second sheave of the two-sheaved pulley c^2, and also about the pulley c^5, located at the base of the post A, each end of the said operating-cord being attached to the counterbalancing-weight c^3. By raising the counterbalance-weight it will be seen that the lamp L will be lowered, also the electrical conductors 2 3, leading from the cross-bar *b*, secured to the upper end of the post A and to the cross-bar *d* of the lamp, the terminal of the said conductors being attached to or wound around the porcelain knobs 4 4, fastened to each end of the cross-bar.

The cross-bar *d*, Figs. 5 and 6, is provided with a central hole, 5, into which is fitted the collar or socket 6. A projection or rim near the bottom of the collar 6 furnishes a suitable bearing, upon which rests the clamp 7, which clamp is secured to the bottom of the cross-bar *d* and is adapted to fit the outer surface of the collar or socket 6, and by loosening the threaded screw 8 the collar may be partly revolved in the clamp, and when the screw 8 is tightened the collar will be held rigidly in any desired position as to rotation. The collar or socket 6 is also provided with an elongated slot in the top, through which is inserted the eye or tongue of the lamp-chimney 9, Fig. 7.

The object of the device is to allow the lamp, when suspended upon the carrying-cable above described, to be partly revolved in either direction, so that the shadows from the frame of the lamp may be cast at such opposite points as shall be desired.

It will be noticed that the length of the collar or socket 6 allows the eye of the lamp-chimney to appear just above the upper surface of the cross-bar *d*, its object being to put the top of the porcelain knob or insulator on

the same plane with the lamp-chimney eye, in order that the weight of the line-wires, tending to draw the cross-bar to one side, may not prevent the lamp from hanging exactly perpendicular.

By attaching the conductors to the upper end of the post A when the lamp is lowered it will gradually approach the post in the arc of a circle about the point of attachment of the conductors as a center.

The switch-box is located near or at the top of the post A, and is adapted to be operated by a hand-lever at the base of the post.

Many of the features thus far described are substantially the same as in the application above referred to, and no claim to them is herein made.

A retaining device is provided at the outer end of the jib *a*, which consists of a supporting-frame, *e*, attached to the jib, and two forks, e' e^2, secured one to each end of the frame *e* and extending downward. The two forks bestride the cross-bar *d*, as best shown in Fig. 4, and firmly hold the same in place, preventing the lamp from swinging in a high wind. To steady the jib *a* and keep it in fixed position, a counterbalancing-arm, *f*, is secured in a socket or recess in the head A′ in the same manner as the arm or jib *a* above described, and a weight, *f′*, is attached to the outer end of the said arm *f*. The two arms *a f* are connected together by brace-rods f^2 f^3, drawn taut by a turnbuckle, f^4, and another brace-rod, f^6, is placed beneath the arm or jib *a* to support it. When employing the tubular arm or jib *a*, the lamp-carrying cable may be kept concealed from ice, snow, &c.

I claim—

1. In a crane or support for electric lamps, the vertical post, the head A′, the counterbalanced tubular jib or arm, and the counterbalancing-arm *f*, combined with a lamp-carrying cable placed within the tubular arm *a*, the said cable having the lamp suspended freely from one end and the lamp-balancing weight c^3 secured to the other end thereof, and an operating cord or chain which is held taut by the pulleys c^2 and c^5 at the top and bottom of the mast, respectively, for moving the lamp-carrying cable, substantially as described.

2. In a crane or support for electric lamps, the vertical support and the head A′, combined with the arm *a*, the tapering sleeve *a′*, and the screw cap or nut a^2, substantially as and for the purposes set forth.

3. The lamp L and its cross-bar, combined with a retaining device, substantially as described, for holding the lamp in position, as set forth.

4. The lamp L, having the tongue at its upper end, combined with the cross-bar *d*, having the central socket or recess for the tongue, substantially as described.

5. The lamp L and its cross-bar, combined with the collar and clamp, permitting the lamp and collar to be partly rotated at will.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

LEANDER J. WING.

Witnesses:
JOHN A. SHELDON,
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